

Range extension and geographic distribution of the poorly known species, *Contomastix leachei* Peracca, 1897 (Squamata: Teiidae)

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ABSTRACT: The records of distribution of *Contomastix leachei* Peracca, 1897 indicate that this species is endemic of Southeast Jujuy Province, occurring only in the Ledesma Department. Here, we report the southernmost known locality of this species, from Alemanía, Salta Province, Argentina. This record represents the southern limit of distribution of the species. We also provide an updated range map for this species based on data from museum records and field studies.

The *Contomastix* genus was recently proposed by Harvey *et al.* (2012) for grouping the species of the formerly called *Cnemidophorus lacertoides* group (Cei 1993) in a monophyletic cluster. Five species are currently recognized for this new genus: *C. lacertoides*, *C. leachei*, *C. serrana*, *C. vittata*, and *C. vacariensis* (Borteiro *et al.* 2013) which are distinguished by having a tongue that is bilobed posteriorly, usually 10 longitudinal rows of ventral scales, and lack of granules in the suborbital semicircles (Cei 1993). This genus is distributed from southern Brazil, through Argentina and Uruguay, to central Bolivia (Peters and Donoso-Barros 1970; Arias *et al.* 2011; Harvey *et al.* 2012).

Contomastix leachei is a poorly known species, with secretive habits, living under stones near creeks and shrubby habitats (Cei and Scrocchi 1991). This species was described by Peracca (1897) based on seven specimens deposited in the Herpetological Collection of Museo Zoologia Università di Torino (MZUT R. 2146, 1-7). The type locality is Valle San Lorenzo, 30 km NW of Ledesma Department, Jujuy Province, Argentina (Figure 1). This locality is in the region known as the “Yungas *sensu stricto*” (Brown *et al.* 2002), in northern Argentina, which is characterized by a subtropical climate, dense forests, and wide elevation range (400-3000 m).

Museum records indicate that the distribution of *Contomastix leachei* encompasses a radius of no more than 52 km associated with the lower reaches of the San Lorenzo River, in Sierra de Santa Barbara, Urundel, Caimancito and Parque Nacional Calilegua (Figure 1). Here we document the southernmost locality known for this species and provide an updated range map based on museum records and on our recent field studies.

During a fieldwork we collected one adult female *Contomastix leachei* (MCN 2881; Figure 2) on 14 March 2009, from Alemanía, Guachipas Department, Salta Province, Argentina. The lizard was collected from the banks of the Conchas River (25°37'9.4"S, 65°36'19.7"W, 1181 m; Figure 1). This region is defined as “Yungas

transition”, which is characterized by being drier than the “Yungas *sensu stricto*”, with vegetation typical of the semi-arid Chaco and “Chaco serrano” ecotones (Brown *et al.* 2002).

In order to evaluate the taxonomic status of the specimen collected, we take the following characters of pholidosis (Table 1): supraocular scales on right side; supraciliary scales on right side; femoral pores on both sides; longitudinal rows of ventral scales; transverse rows of ventral scales; subdigital lamellae under fourth finger; subdigital lamellae under fourth toe; scales around midbody (counted midway between fore- and hindlimbs, excluding ventrals); scales around tail (counted on fourth transverse row); and dorsal scales (counted along the midline, from occiput to first transverse row of scales around tail). In addition, the following measurements were recorded in mm (Table 2): snout-vent length (SVL); head length (HL); head width (HW), trunk length (TrL), humeral length (HuL), forelimbs length (FL), tibia length (TiL), femur length (FeL), and hindlimbs length (HiL). Scale observation and measurements were taken using a digital caliper to the nearest 0.02 mm, under a stereomicroscope (10-40x).

The analysis of all characters analyzed (coloration, meristic and morphometric) suggest that specimen collected in Alemanía (new locality) corresponds to *Contomastix leachei*. Thus, the new record represents the southernmost known locality for this species, extending the known geographic distribution *ca.* 185 km (airline) NW from type locality.

Specimens examined are deposited at the Museo de Ciencias Naturales, Universidad Nacional de Salta (MCN), Museo Argentino de Ciencias Naturales, Buenos Aires (MACN), and Fundación Miguel Lillo, Tucumán (FML), all in Argentina. *Contomastix leachei*: Argentina, Jujuy, San Martín, Parque Nacional Calilegua. MCN 3221 and 3231. FML 855, Estancia Cachipunco, Sierra de Santa Bárbara. FML 18537, Caimancito. Salta, MCN 288, Alemanía. MACN 9913-9924, MCN 9915-9924, Orán, Urundel.

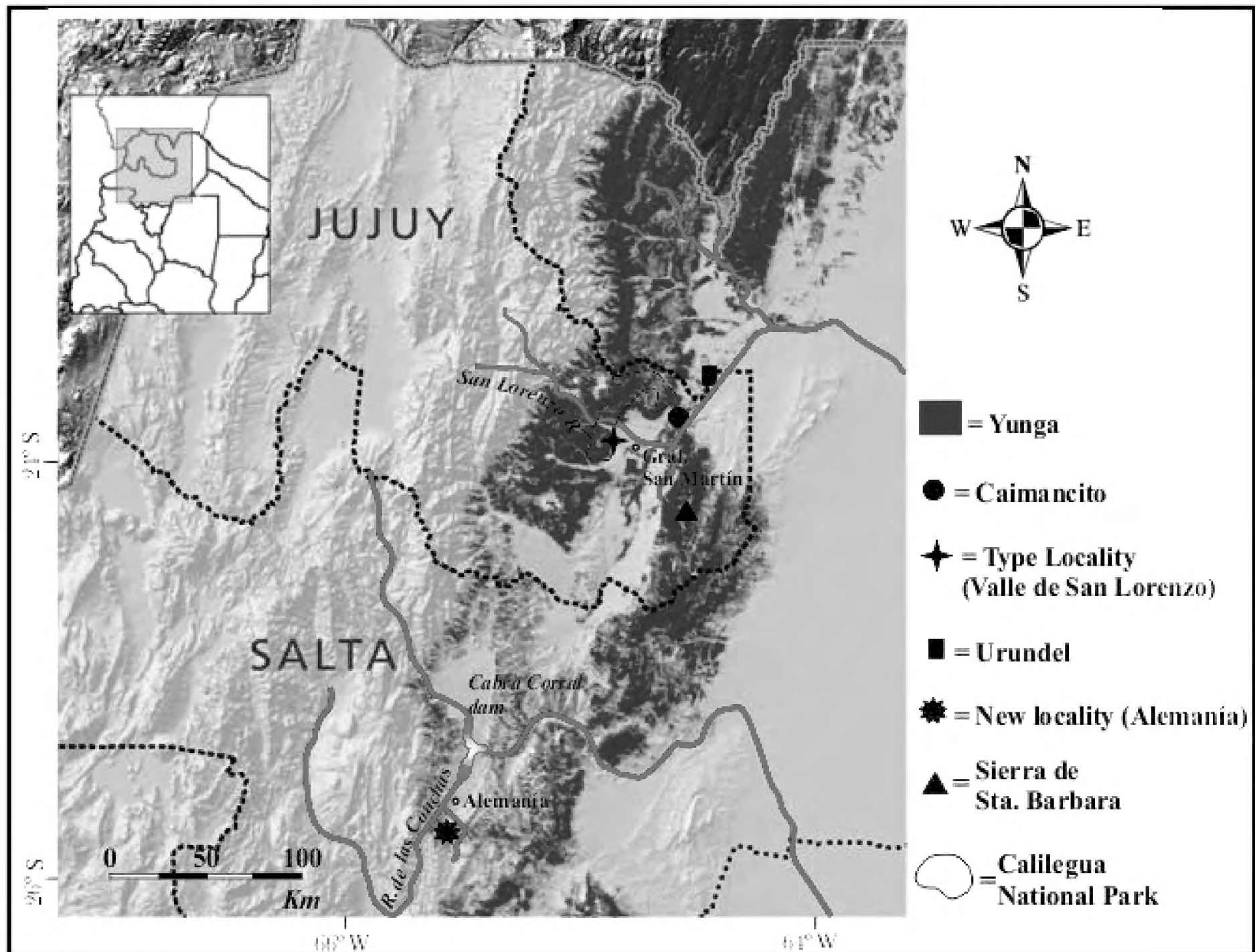


FIGURE 1. Geographic distribution of *Contomastix leachei* in Jujuy and Salta Province, northern Argentina.

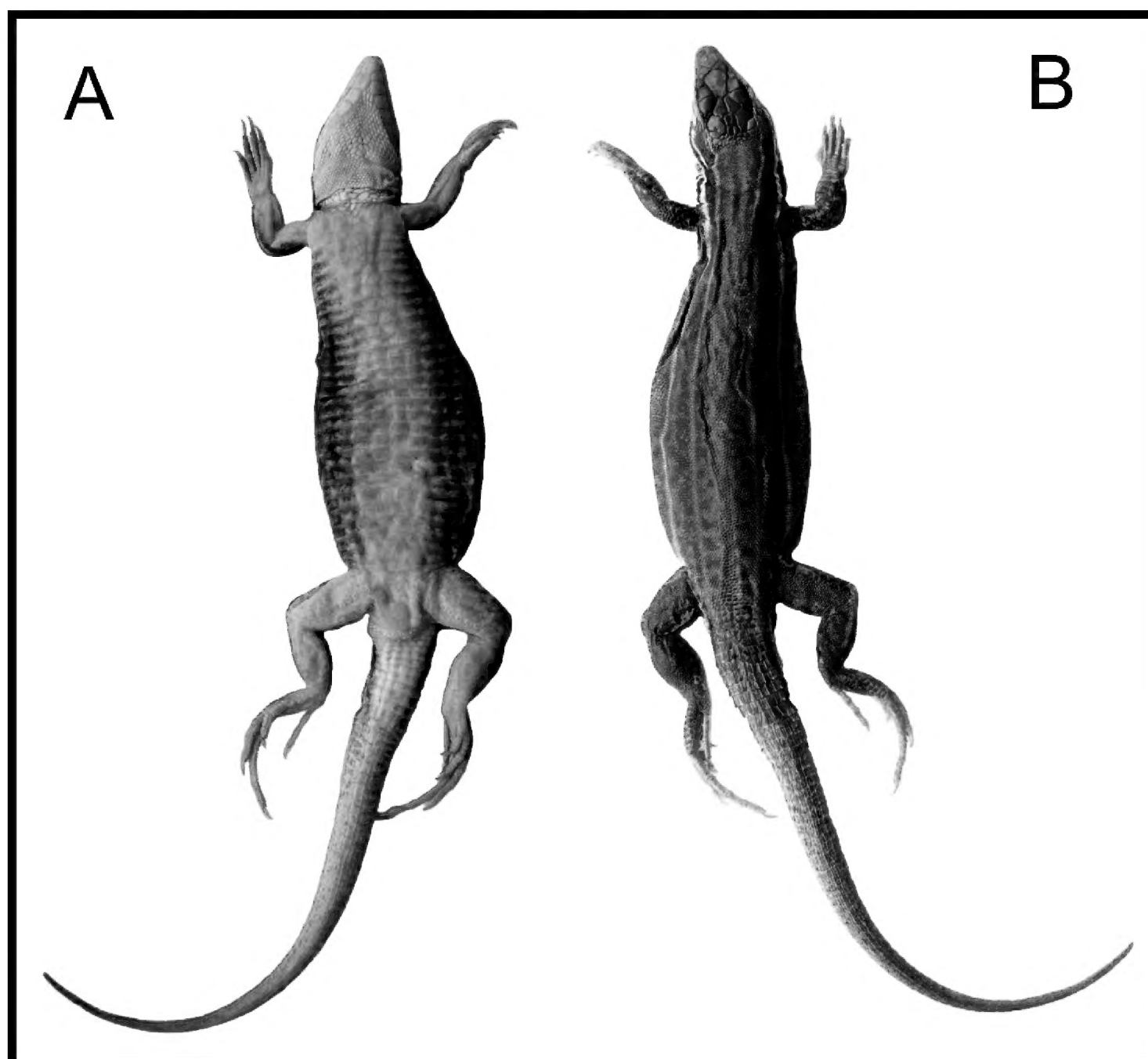


FIGURE 2. *Contomastix leachei* (MCN 2881) from new locality, Alemania, Salta Province, Argentina.

TABLE 1. Selected meristic characters for *Contomastix leachei*. Values indicate mean, with range in parentheses.

CHARACTERS	ALEMANÍA (n= 1)	TYPE LOCALITY AND NEARBY (n= 12)
Supraocular	3	3 (0)
Supraciliary	5	5.2 (4–5)
Transversal rows of ventral	30	32.1 (30–33)
Longitudinal rows of ventral	10	10 (0)
Femoral pores	21	22 (21–24)
Fourth finger lamellae	14	15 (12–17)
Fourth toes lamellae	23	26.2 (24–29)
Scales around midbody	81	85.4 (77–97)
Scales around tail	22	27.4 (24–31)
Dorsal scales	199	189.1 (176–202)

TABLE 2. Selected morphometric characters for *Contomastix leachei*. Values indicate mean, with range in parentheses.

MEASUREMENTS (mm)	ALEMANÍA (n= 1)	TYPE LOCALITY AND NEARBY (n= 12)
Snout–vent length (SVL)	63.7	58.1 (53.1–62.8)
Tail length (TL)	Regenerated	108.3 (99–123.5)
Trunk length (TrL)	36.5	29.5 (26.1–32.4)
TrL/SVL	0.6	0.5 (0.5–0.6)
Head larger (HL)	15.1	14.3 (12.3–16.3)
HL/SVL	0.24	0.25 (0.22–0.27)
Head wide	9.6	8.5 (7.3–9.6)
Forearm length	19.4	18.3 (15.5–20.1)
Foot length	18.7	18.9 (17.4–20.3)
Forelimbs length	37.1	36.8 (33.2–40.1)

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LITERATURE CITED

Arias, F., C.M. de Carvalho, M.R. Rodrigues and H. Zaher. 2011. Two new species of *Cnemidophorus* (Squamata: Teiidae) of the *C. ocellifer* group, from Bahia, Brazil. *Zootaxa* 3022: 1-21.

Borteiro, C., F. Kolenc, C. Prigioni, M.L. Lyra and D. Baldo. 2013. A lost species or the loss of stripes? The case of *Contomastix* lizards from Cabo Polonio, Uruguay, with observations on *C. lacertoides* (Duméril & Bibron) and *Cnemidophorus grandensis* Cope (Squamata, Teiidae). *Zootaxa* 3620: 245–259.

Brown, A.D., A. Grau, T. Lomáscolo and N.I. Gasparri. 2002. Una estrategia de conservación para las selvas subtropicales de montaña (Yungas) de Argentina. *Ecotrópicos* 15: 147-159.

Cei, J.M. 1993. Reptiles del Noroeste, Nordeste y Este de la Argentina. Herpetofauna de las Selvas Subtropicales, Puna y Pampas. *Museo Regionale di Scienze Naturali, Torino, Monografie XIV*.

Cei J.M. and G.Scrocchi. 1991. A poorly known and discussed species, *Cnemidophorus leachei* Peracca 1897, and general remarks on the genus *Cnemidophorus* in Argentina (Lacertilia, Teiidae). *Bollettino del Museo Regionale di Scienze Naturali, Torino* 9: 233-244.

Harvey, M.B., Ugueto, G.N. and R.L. Jr. Gutberlet. 2012. Review of teiid morphology with a revised taxonomy and phylogeny of the Teiidae (Lepidosauria: Squamata). *Zootaxa* 3459: 1-156.

Peracca, M.G. 1897. Viaggio del Dr Alfredo Borelli nel Chaco boliviano e nella Rep. Argentina: Rettili ed Anfibi. *Bollettino dei Musei di Zoologia ed Anatomia comparata della R. Università di Torino*, 12: 1–19.

Peters, J.A. and R. Donoso-Barros. 1970. Catalogue of the Neotropical Squamata. Part II. Lizards and Amphisbaenians. *Bulletin of the United States National Museum, Washington, DC* 297: 1-293.

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